Klamath Network Featured Creature
May 2011

Porcupine
(Erethizon dorsatum)

FIELD NOTES:

General Description:
Their overall color is brownish-yellow to dark brown or black with white highlights on a round body with short strong legs. That doesn't quite conjure up a porcupine until you add in "covered in a coat of sharp quills." Ah yes, a porcupine! As the third largest rodent (behind capybara and beaver), the porcupine is 24-36 inches long (of which 8-10 inches is tail) and weighs up to 40 pounds. They are nearsighted and slow-moving. Curved claws adorn their four-toed front and five-toed rear feet. They are primarily nocturnal or crepuscular, but may be seen at any time since they do not typically return to their dens during the daylight hours. Porcupines make a range of vocalizations, often making the sounds with their teeth.

Reproduction and Development:
Porcupines den in a tree bole or rocky area. Although they do not hibernate, they are decidedly less active in the winter. Leading mainly solitary lives, they breed in the fall to produce a single young in the spring. The newborn's soft quills harden within hours of birth. Porcupines reach sexual maturity at 18 months and have incredible longevity for a rodent (5-7 years). They were thought to be the longest lived until recently surpassed by the naked mole rat.

Diet:
Their name coming from the French "*porc espin*," (spined pig), one may expect the porcupine to be an indiscriminant eater. While they do munch leaves and needles, twigs, bark, berries, and seeds in typical herbivore fashion, they have preferred tastes. Possessing a good memory, they deftly re-find favorite food varieties in complex mazes. Porcupines often girdle a tree to get to the cambium in the winter and switch to succulent green plants in the summer. They seek out salty sources (e.g., water lilies, skunk cabbage, and outer tree bark), which unfortunately means they chew salt-treated plywood and also stop on roads that have been de-iced with salt.

http://dwrcdc.nr.utah.gov/rsgis2/search/Display.asp?FlNm=eretdors

http://www.uniprot.org/taxonomy/34844

http://www.britannica.com/EBchecked/media/108820/North-American-porcupine

Habitat and Distribution:
Forests, deserts, rocky outcrops, hillsides, and grasslands are all suitable habitat, but only in a limited range of temperate and tropical locations in Asia, Africa, southern Europe, and the Americas. They are most commonly found in North America in coniferous and mixed forests.

Where to See It in the Klamath Parks:
Porcupines roam all the Klamath Network parks.

Defense:
The North American variety of porcupine has 30,000+ quills attached singularly to the skin (as opposed to the clustered attachment of Old World species) and interspersed with bristles, hair, and undercoat. The quills are modified hairs, coated in thick keratin plates and embedded in the skin muscles. When passive, the quills lay flat against the body. However, they bristle up when agitated. Quills fall out with shaking and are released upon contact, but, contrary to long-standing tales, cannot be launched as arrows at a would-be attacker. The porcupine will also swing its barbed tail towards an attacker, to deliver a painful blow. Once lodged into an attacker, barbs on the quills make them difficult to remove. Porcupines re-grow their quills 10-45 days after losing them. Despite their notorious defense mechanism, their unprotected underside leaves them vulnerable to the occasional predator, such as the fishers, coyotes, wolverines, mountain lions, great horned owls, and humans. Interesting to note, this species is protected in some states because it provides an easily obtained source of food for individuals lost in the woods.

Self-defense:
As they often reach out on unstable branches for choice meals of tender tree buds and fall to the ground, the porcupine has developed an antibiotic on its skin to prevent infection from being pierced with its own quills. It is the only native North American mammal with this adaptation.

More Information:
Verts, B. J., and L. N. Carraway. 1998. Land mammals of Oregon. University of California Press. Berkeley, CA.